STATE OF MARYLAND

DHMH

Maryland Department of Health and Mental Hygiene
201 W. Preston Street • Baltimore, Maryland 21201
Martin O'Malley, Governor – Anthony G. Brown, Lt. Governor – Joshua M. Sharfstein, M.D., Secretary

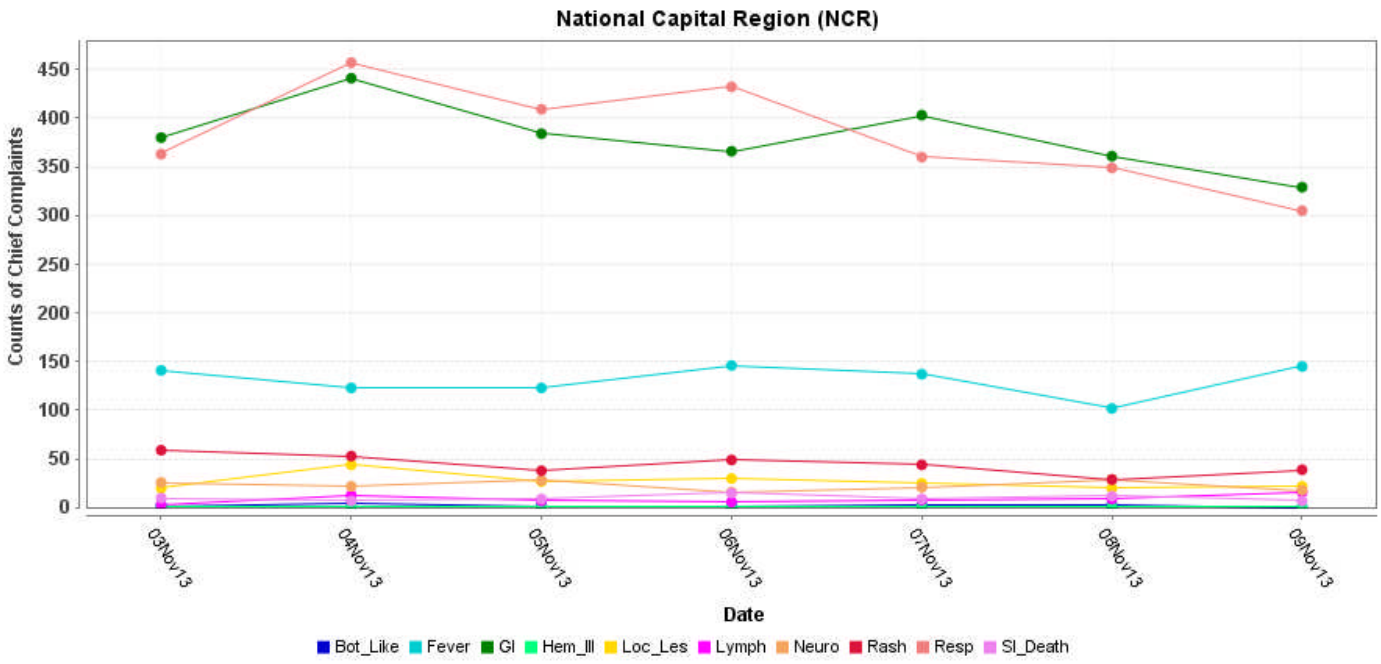
November 15, 2013

Public Health & Emergency Preparedness Bulletin: # 2013:45
Reporting for the week ending 11/09/13 (MMWR Week #45)

CURRENT HOMELAND SECURITY THREAT LEVELS

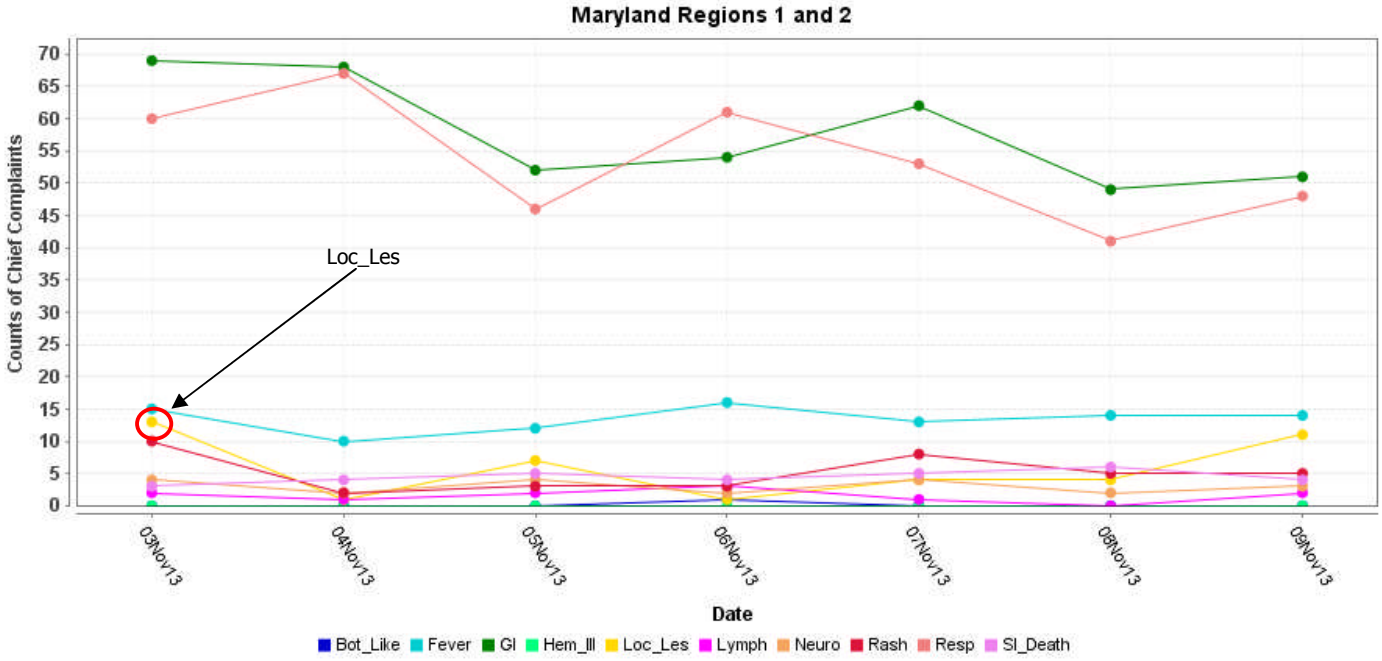
National: **No Active Alerts**
Maryland: **Level Four (MEMA status)**

SYNDROMIC SURVEILLANCE REPORTS
ESSENCE (Electronic Surveillance System for the Early Notification of Community-based Epidemics):
Graphical representation is provided for all syndromes, excluding the "Other" category, all age groups, and red alerts are circled. Red alerts are generated when observed count for a syndrome exceeds the 99% confidence interval. Note: ESSENCE – ANCR uses syndrome categories consistent with CDC definitions.
Overall, no suspicious patterns of illness were identified. Track backs to the health care facilities yielded no suspicious patterns of illness.

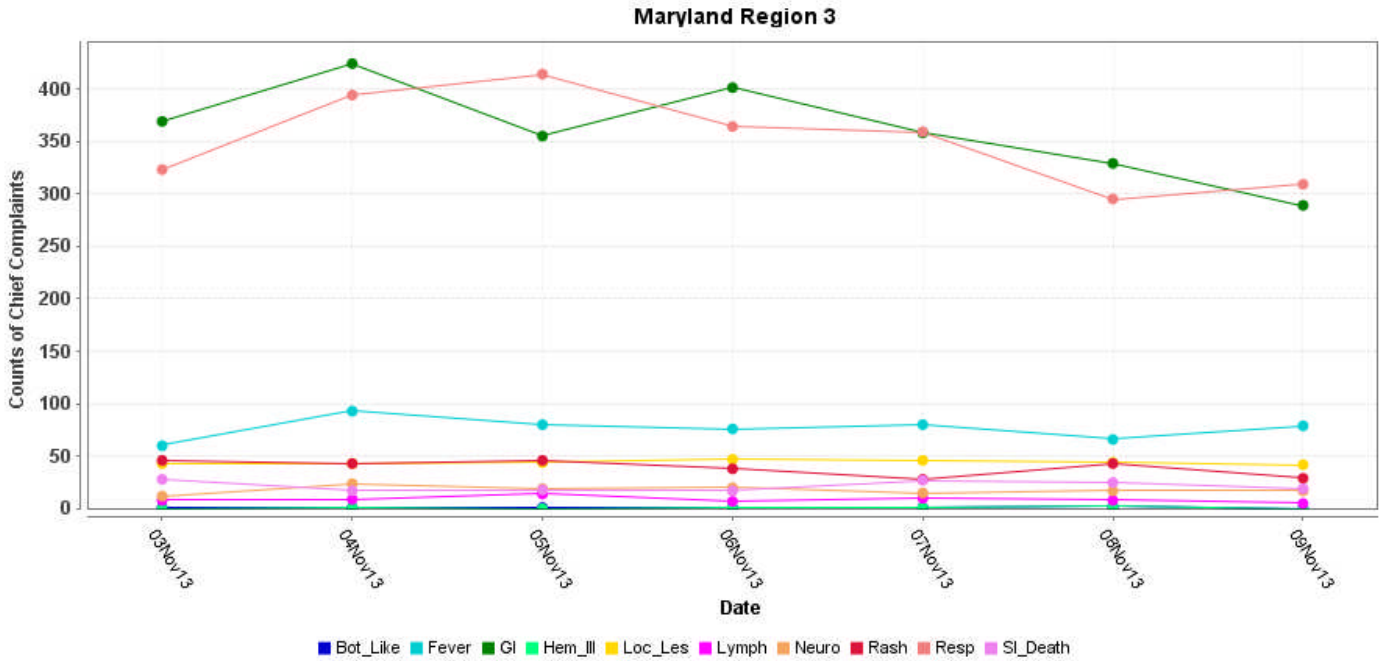


*Includes EDs in all jurisdictions in the NCR (MD, VA, and DC) reporting to ESSENCE

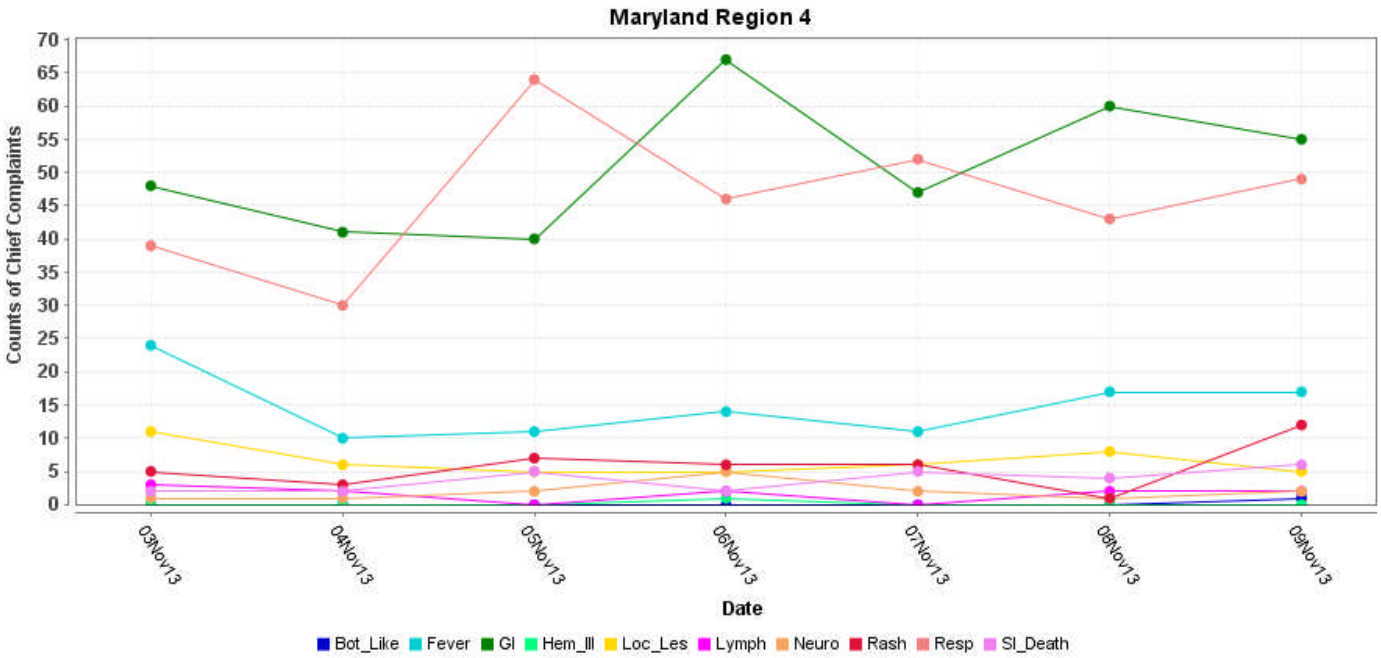
MARYLAND ESSENCE:



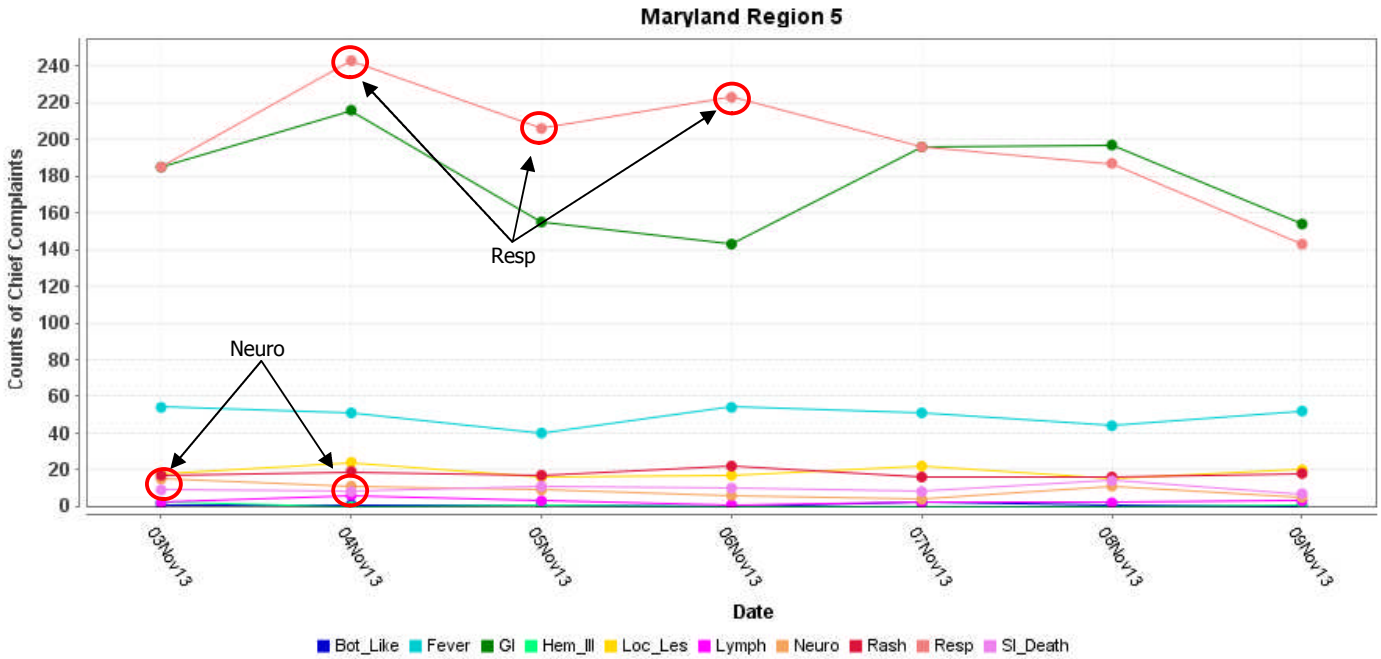
* Region 1 and 2 includes EDs in Allegany, Frederick, Garrett, and Washington counties reporting to ESSENCE



* Region 3 includes EDs in Anne Arundel, Baltimore City, Baltimore, Carroll, Harford, and Howard counties reporting to ESSENCE



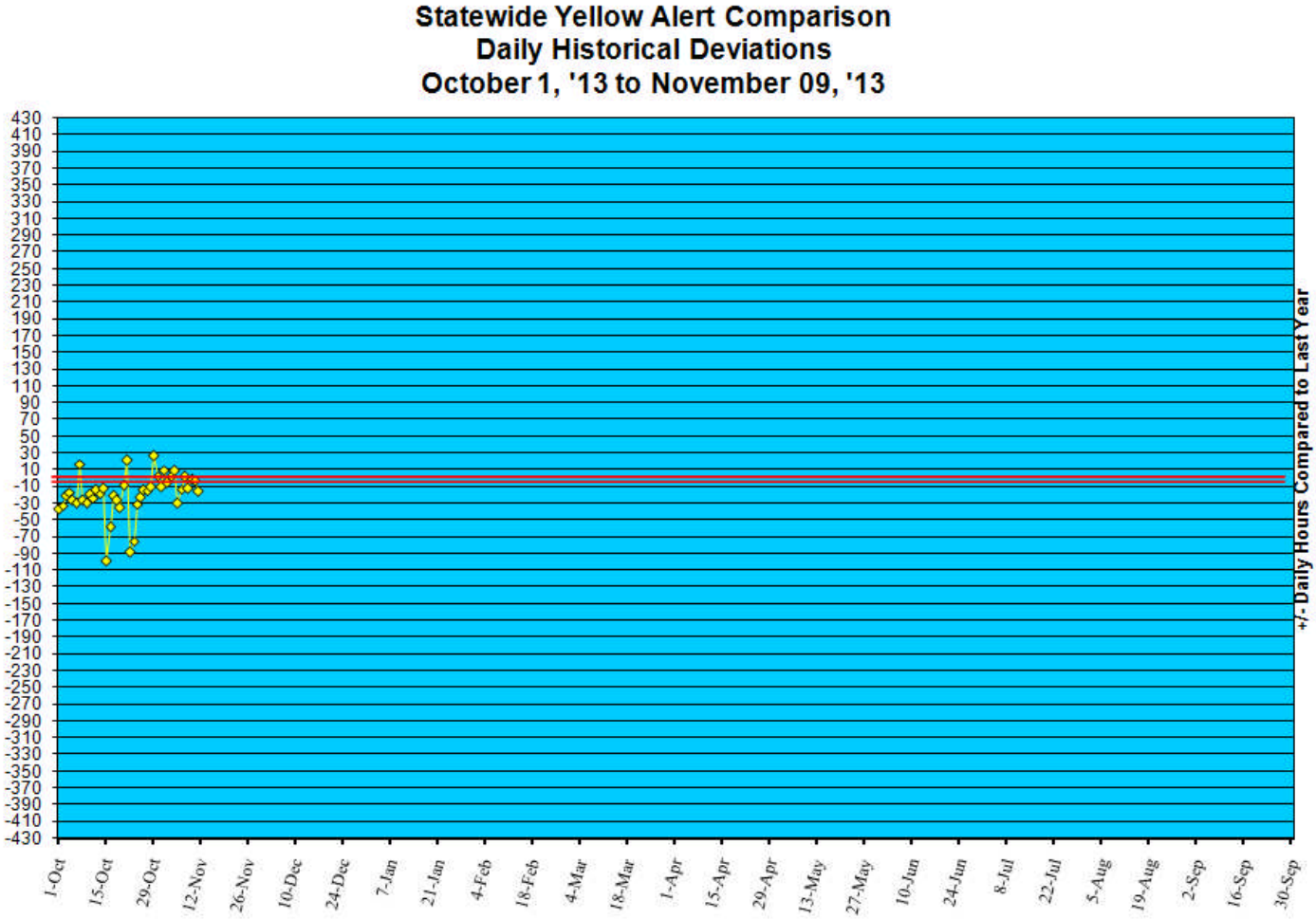
* Region 4 includes EDs in Cecil, Dorchester, Kent, Somerset, Talbot, Wicomico, and Worcester counties reporting to ESSENCE



* Region 5 includes EDs in Calvert, Charles, Montgomery, Prince George's, and St. Mary's counties reporting to ESSENCE

REVIEW OF EMERGENCY DEPARTMENT UTILIZATION

YELLOW ALERT TIMES (ED DIVERSION): The reporting period begins 10/01/13.



REVIEW OF MORTALITY REPORTS

Office of the Chief Medical Examiner: OCME reports no suspicious deaths related to an emerging public health threat for the week.

MARYLAND TOXIDROMIC SURVEILLANCE

Poison Control Surveillance Monthly Update: Investigations of the outliers and alerts observed by the Maryland Poison Center and National Capital Poison Center in September 2013 did not identify any cases of possible public health threats.

REVIEW OF MARYLAND DISEASE SURVEILLANCE FINDINGS

COMMUNICABLE DISEASE SURVEILLANCE CASE REPORTS (confirmed, probable and suspect):

Meningitis:	**Aseptic**	**Meningococcal**
New cases (November 3 - November 9, 2013):	6	0
Prior week (October 27 - November 2, 2013):	9	0
Week#45, 2012 (November 5 – November 11, 2012):	16	0

4 outbreaks were reported to DHMH during MMWR Week 45 (November 3 - November 9, 2013)

1 Gastroenteritis Outbreak
1 outbreak of GASTROENTERITIS associated with a Shelter

1 Respiratory Illness Outbreak
1 outbreak of ILI/PNEUMONIA in an Assisted Living Facility

1 Rash Illness Outbreak
1 outbreak of SCABIES in a Nursing Home

1 Other Outbreak
1 outbreak of PHARYNGITIS associated with a School

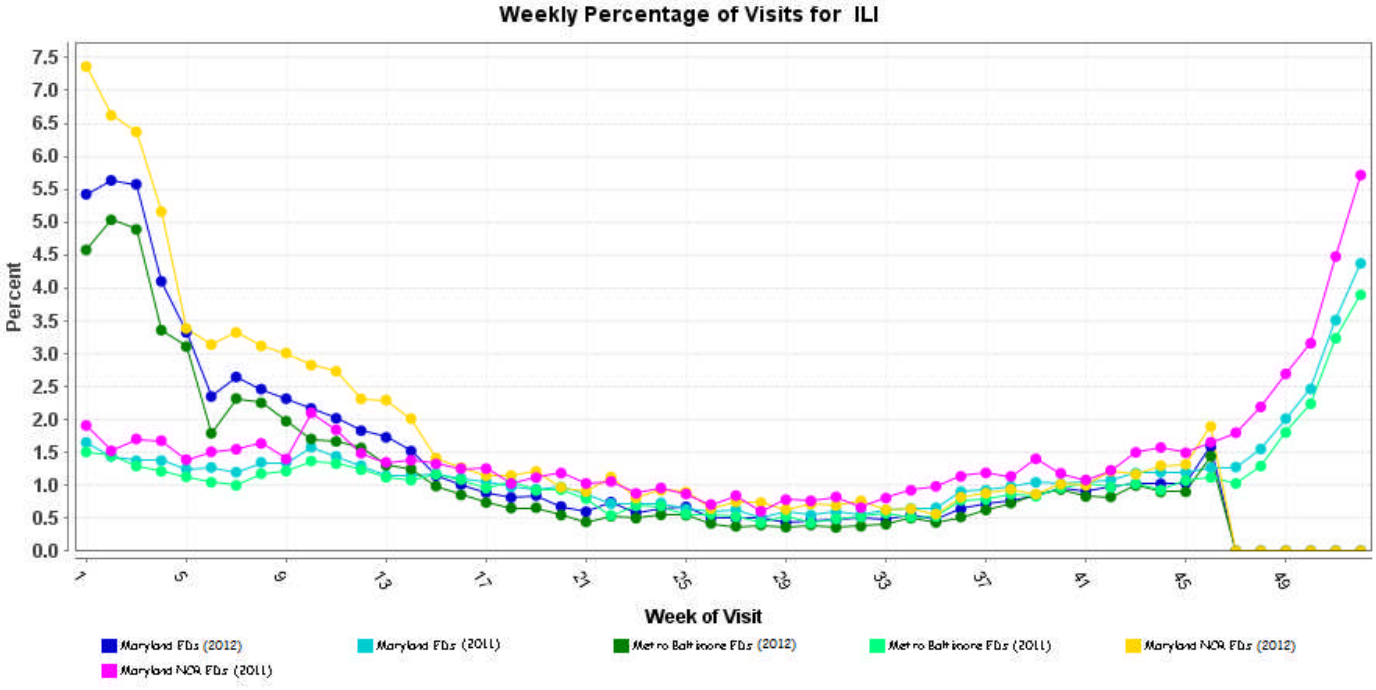
MARYLAND SEASONAL FLU STATUS

Seasonal Influenza reporting occurs October through May. Seasonal influenza activity for Week 45 was: No Activity with Minimal Intensity

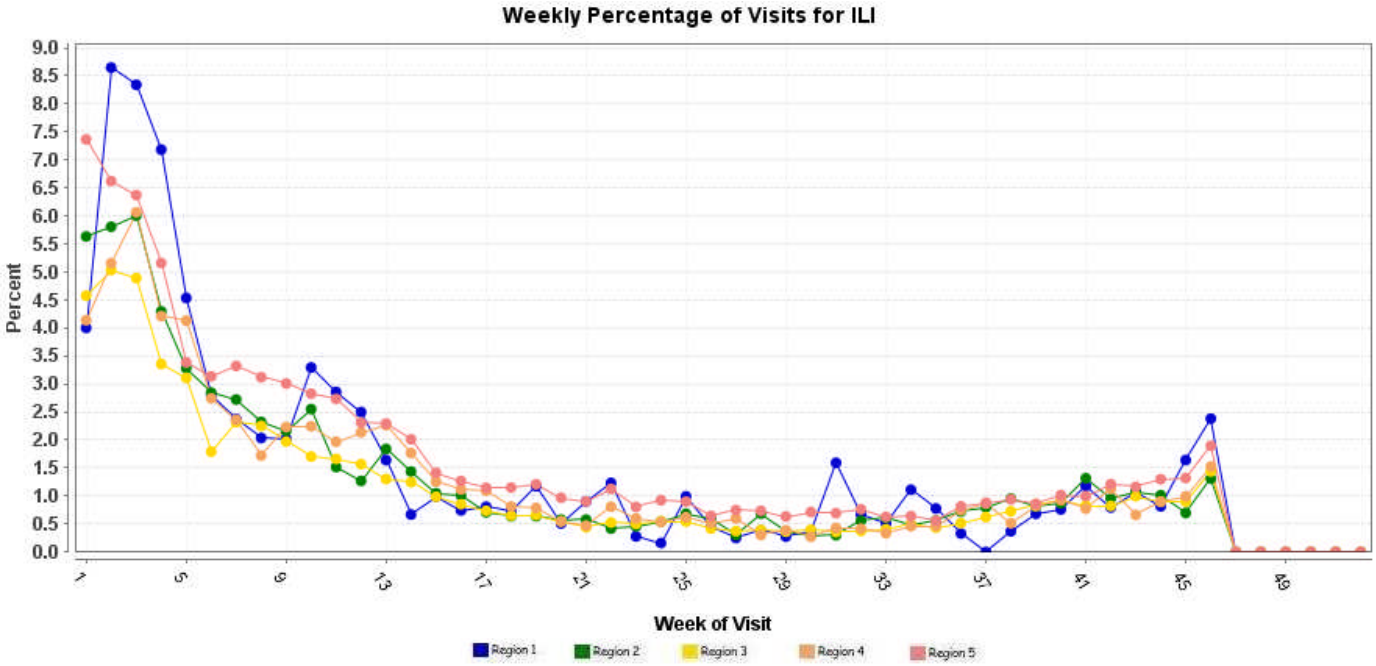
SYNDROMIC SURVEILLANCE FOR INFLUENZA-LIKE ILLNESS

Graphs show the percentage of total weekly Emergency Department patient chief complaints that have one or more ICD9 codes representing provider diagnoses of influenza-like illness. These graphs do not represent confirmed influenza.

Graphs show proportion of total weekly cases seen in a particular syndrome/subsyndrome over the total number of cases seen. Weeks run Sunday through Saturday and the last week shown may be artificially high or low depending on how much data is available for the week.



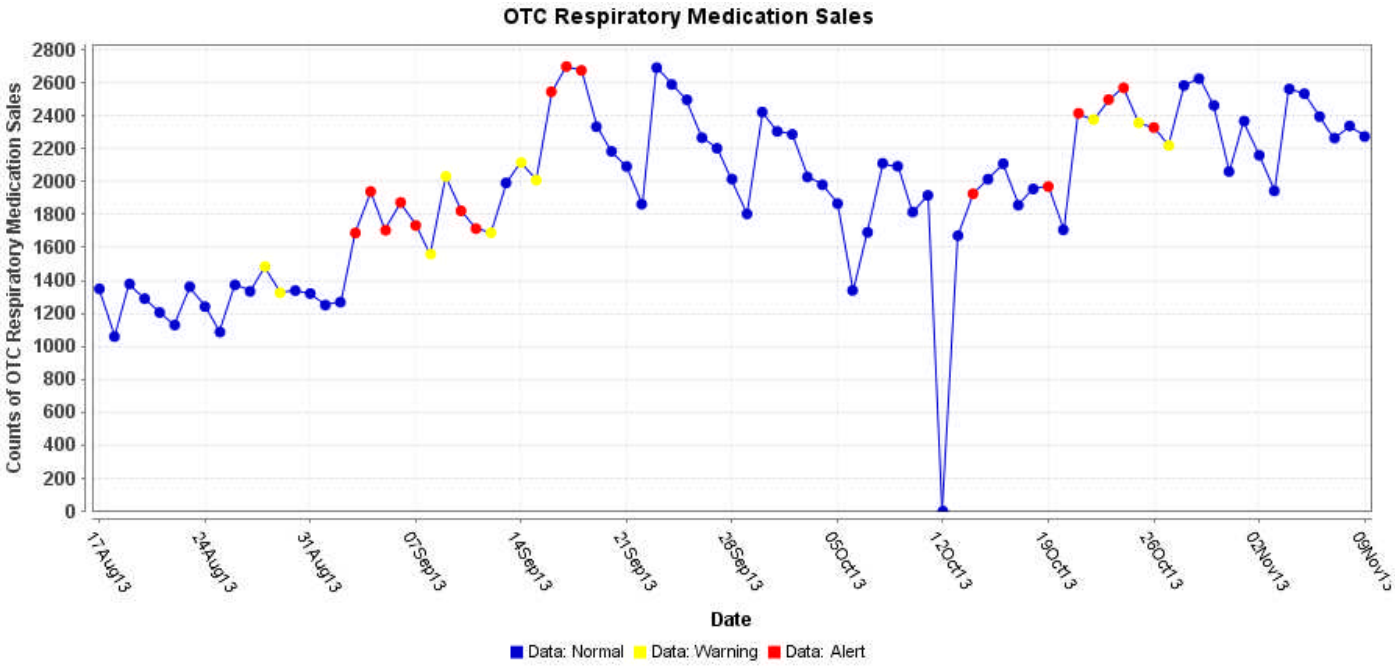
* Includes 2012 and 2013 Maryland ED visits for ILI in Metro Baltimore (Region 3), Maryland NCR (Region 5), and Maryland Total



*Includes 2013 Maryland ED visits for ILI in Region 1, 2, 3, 4, and 5

OVER-THE-COUNTER (OTC) SALES FOR RESPIRATORY MEDICATIONS:

Graph shows the daily number of over-the-counter respiratory medication sales in Maryland at a large pharmacy chain.



PANDEMIC INFLUENZA UPDATE / AVIAN INFLUENZA-RELATED REPORTS

WHO update: The current WHO phase of pandemic alert for avian influenza is ALERT. Currently, the avian influenza H5N1 virus continues to circulate in poultry in some countries, especially in Asia and northeast Africa. This virus continues to cause sporadic human infections with some instances of limited human-to-human transmission among very close contacts. There has been no sustained human-to-human or community-level transmission identified thus far.

Influenza A (H7N9) is one of a subgroup of influenza viruses that normally circulate among birds. Until recently, this virus had not been seen in people. However, human infections have now been detected. As yet, there is limited information about the scope of the disease the virus causes and about the source of exposure. The disease is of concern because most patients have been severely ill. There is no indication thus far that it can be transmitted between people, but both animal-to-human and human-to-human routes of transmission are being actively investigated.

Alert phase: This is the phase when influenza caused by a new subtype has been identified in humans. Increased vigilance and careful risk assessment, at local, national and global levels, are characteristic of this phase. If the risk assessments indicate that the new virus is not developing into a pandemic strain, a de-escalation of activities towards those in the interpandemic phase may occur. As of October 8, 2013, the WHO-confirmed global total of human cases of H5N1 avian influenza virus infection stands at 641, of which 380 have been fatal. Thus, the case fatality rate for human H5N1 is approximately 59%.

AVIAN INFLUENZA, HUMAN, H7N9 (CHINA): 5 November 2013, On [5 Nov 2013], Chinese health authorities reported 2 more novel H7N9 infections from different parts of the country, including in a 3-year-old boy with mild illness who is hospitalized [previously reported in ProMED-mail post: Avian influenza, human (134): China (GD), H7N9, child 20131105.2040007], according to media reports and an early notification from the World Health Organization (WHO). The cases are the 3rd and 4th to be reported since the middle of October 2013 and would boost China's number of H7N9 infections to 139, which includes 45 deaths. The boy is hospitalized in Dongguan City in southern China's Guangdong province, where he is in stable condition, Xinhua, China's state news agency reported in [November 2013]. His infection was detected during routine hospital monitoring of flu like cases. Donnguan is a large industrial city that borders Guangzhou, the provincial capital. The youngster's illness is Guangdong's 2nd H7N9 case. The province's 1st case was reported in early August 2013, months after the virus was detected in poultry markets there. Hong Kong's Centre for Health Protection (CHP) said in a statement that the boy doesn't have a fever and his flu-like symptoms are minor. All 7 of the boy's close contacts who were under close observation tested negative for the virus, though 3 had flu-like symptoms. Very few details were available about the 2nd case-patient, who is from Zhejiang province. The 1st news of the detection came from WHO Twitter posts, which said China had notified it of 2 new lab-confirmed H7N9 cases in Guangdong and Zhejiang. Gregory Hartl, a WHO spokesman, said in separate Twitter posts that the 2 H7N9 cases were reported from different parts of China on the same day. "Winter is starting," he said. In October 2013, Zhejiang province, located roughly 800 miles northeast of Guangdong, reported 2 H7N9 cases, in a 35-year-old man who was hospitalized in critical condition and in a 67-year-old farmer who had contact with live poultry and was also listed in critical condition. Zhejiang is the Chinese province with the most H7N9 cases, with 49 infections and 11 deaths reported so far. When the H7N9 virus was 1st detected China in [March 2013], the number of cases soared and then dropped sharply in May 2013, with only 2 additional cases reported over the summer. Global health officials said poultry-market closures probably played a role in the declining number of cases, and there was a chance that the virus could burn itself out. They said, however, that they expected sporadic cases to continue. And they warned that although flu viruses are unpredictable, there was a chance that the number of cases could start rising again as the Northern Hemisphere's weather cools, a pattern seen with other avian influenza viruses such as H5N1. The 4 H7N9 infections reported in China so far this fall [2013] are fueling speculation that the events could herald another wave of infections with the new virus, but some influenza experts say it's too soon to tell. Marion Koopmans, head of virology at the Laboratory for Infectious Diseases of the National Institute of Public Health and the Environment in the Netherlands, said the timing of the cases gives a hint of seasonality, but she said so far there are too few of them and that it's too early to say whether they signify a trend. She said it would be useful to see some information from periodic market surveys to assess possible trends. "Whether or not we expect seasonality is related to the question where these viruses come from," Koopmans said, adding that H5 seasonality reports seem to come mainly from behavior of the virus in wild birds. "If H7N9 is circulating in backyard farms, the picture may be quite different." Poultry are strongly suspected to be the source of the new virus, and the WHO has warned that since H7N9 causes only subclinical infection in the birds, it could still be circulating in China and perhaps its neighbors. It has urged China and bordering countries to continue vigilance for the virus.

AVIAN INFLUENZA, HUMAN, H5N1 (CAMBODIA): 5 November 2013, The Ministry of Health (MoH) of the Kingdom of Cambodia wishes to advise members of the public that one new human case of avian influenza has been confirmed for the H5N1 virus. This is the 23rd case this year [2013] and the 44th person to become infected with the H5N1 virus in Cambodia. The 23rd case died on 26 Oct 2013. Of the 44 confirmed cases, 33 were children under 14, and 27 of the 44 were female. In addition, only 11 cases out of the 23 cases this year survived. The 23rd case, a 2-year-old girl from Svay Chrum village, Borng Bort Kandal commune, Bakane district, Pursat province was confirmed positive for H5N1 human avian influenza on 30 Oct 2013 by Institut Pasteur du Cambodge. The girl developed fever on 17 Oct 2013. On 19 Oct 2013, her parents sought treatment for her at a local private practitioner. Her condition worsened, and she was admitted to Jayavarman VII Hospital in Siem Reap on 25 Oct 2013 with fever, running nose, lethargy, dyspnea [shortness of breath], cough and breathing difficulties. Laboratory samples were taken the same day, but no Tamifu was administered. The girl died on 26 Oct 2013. Investigations in Svay Chrum village by the Ministry of Health's Rapid Response Teams (RRT) and the Ministry of Agriculture, Forestry and Fishery's Animal Health Task Force revealed that 2 months before the girl's illness, poultry had suddenly died at her grandparent's house. The child often stayed with her grandparent in this house. Human and animal investigations are underway to determine whether the girl had direct exposure or handled the dead chickens. The Ministry of Health's RRTs and the Ministry of Agriculture, Forestry and Fishery's Animal Health Task Force are working together closely in Svay Chrum village in Pursat to investigate and implement control measures. The RRTs are trying to identify the case's close contacts, any epidemiological linkage among the 23 [2013] cases, and initiating preventive treatment as required. The Animal Health Task Force is investigating cases of poultry deaths in the village. "Avian influenza H5N1 remains a serious threat to the health of all Cambodians and more so for children, who seem to be most vulnerable and are at high risk. There have been 23 cases of H5N1 infection in humans this year [2013]. Children often care for domestic poultry by feeding them, cleaning pens and gathering eggs. Children may also have closer contact with poultry as they often treat them as pets and also seem to be most vulnerable and are at high risk because they like to play where poultry are found. I urge parents and guardians to keep children away from sick or dead poultry and prevent them from playing with chickens and ducks. Parents and guardians must also make sure children thoroughly wash their hands with soap and water before eating and after any contact with poultry. Hands may carry the virus, which cannot be seen by the naked eye. Soap washes away the virus on hands. If children have fast or difficult breathing, their parents should seek medical attention at the nearest health facility, and attending physicians must be made aware of any exposure to sick or dead poultry," said H.E. Dr. Mam Bunheng, Minister of Health. A nationwide public health education campaign using radio was launched in early October 2013. Also, public health education campaigns are being conducted in Svay Chrum village in Pursat using information, education, and communications materials to inform families on how to protect themselves from contracting avian

influenza. The government's message is to wash hands often with soap and water before eating and after coming into contact with poultry; keep children away from poultry; keep poultry away from living areas; do not eat dead or sick poultry, and all poultry eaten should be well cooked. H5N1 influenza is a flu that normally spreads between sick poultry, but it can sometimes spread from poultry to humans. Human H5N1 avian influenza is a very serious disease that requires hospitalization. Although the virus currently does not easily spread among humans, if the virus changes, it could easily be spread like seasonal influenza. Hence, early recognition of cases is important. The Ministry of Health will continue to keep the public informed of developments via the MoH website http://www.cdcmoh.gov.kh, where relevant health education materials can also be downloaded.

NATIONAL DISEASE REPORTS*

CAMPYLOBACTERIOSIS (USA): 7 November 2013, In October 2012, the Vermont Department of Health (VDH) identified 3 cases of laboratory-confirmed *Campylobacter jejuni* infection in Vermont residents; the isolates had indistinguishable pulsed-field gel electrophoresis (PFGE) patterns. A query of PulseNet, the national molecular subtyping network for foodborne disease surveillance, led to the identification of an additional case each from New Hampshire, New York, and Vermont that had been reported in the preceding 6 months. An investigation led by VDH found that all 6 patients had been exposed to raw or lightly cooked chicken livers that had been produced at the same Vermont poultry establishment (establishment A). Livers collected from this establishment yielded the outbreak strain of *C. jejuni*. In response, establishment A voluntarily ceased the sale of chicken livers on 9 Nov 2012. A food safety assessment conducted by the US Department of Agriculture's Food Safety and Inspection Service (USDA-FSIS) found no major violations at the establishment. This is the 1st reported multistate outbreak of campylobacteriosis associated with chicken liver in the USA. Public health professionals, members of the food industry, and consumers should be aware that chicken livers often are contaminated with *Campylobacter* and that fully cooking products made with chicken liver is the only way to prepare them so they are safe to eat. (Food Safety Threats are listed in Category B on the CDC List of Critical Biological Agents) *non-suspect case

E. COLI EHEC (TENNESSEE): 4 November 2013, Tennessee Department of Health experts say at least 8 cases of illness among children in East Tennessee are likely related to drinking "raw" or unpasteurized milk. The investigation has identified a specific type of *Escherichia coli O157* as the cause of at least 3 of the illnesses. "Some people who consume raw milk because they believe it is healthier than pasteurized milk are putting themselves and others they share it with at risk for a range of serious illnesses," said TDH Commissioner John Dreyzehner, MD, MPH. "Raw milk is 150 times more likely to cause a foodborne illness than pasteurized milk and can be life-threatening to some, particularly the young. Those who consume raw milk are eroding years of progress in reducing dangerous, preventable illnesses." In addition to *E. coli O157*, other harmful bacteria that can be found in unpasteurized milk from cows, goats and other mammals include *Salmonella* and *Campylobacter*. Complications from drinking these pathogens include diarrheal disease; Guillain-Barre syndrome, leading to paralysis; and hemolytic uremic syndrome, which causes kidney failure. "While some adults may be able to tolerate bacteria found in unpasteurized milk or food products made with raw milk, children, older adults, pregnant women and those with weakened immune systems can be in great danger," said Deputy State Epidemiologist John Dunn, DVM, PhD. The Tennessee Department of Agriculture licenses and inspects nearly 400 commercial dairies in Tennessee which produce milk that is safely pasteurized and processed for human consumption. Pasteurized dairy products from commercial dairies are safe and nutritious and are not implicated in the recent cluster of illnesses. "Despite the cleanest barns and the best efforts of farmers, raw milk can contain harmful bacteria," said Tennessee Department of Agriculture Commissioner Julius Johnson. "We all need to understand raw milk can be contaminated with deadly microorganisms. Pasteurization kills these without significantly affecting the taste or nutritional quality of milk." Since 1987, the Food and Drug Administration has prohibited distribution of raw milk across state lines for direct sales to consumers. Some people take extreme measures to obtain raw milk, even buying and consuming raw milk labeled as pet food or investing in shared ownership of a milk cow or goat. Although it is legal in Tennessee for individuals to consume raw milk from their own animals, it doesn't change the risk to their health. To eliminate risk of infection, the Tennessee Department of Health suggests consumers read the labels of all milk and cheese products to make sure they buy only those which have been pasteurized. Pasteurization, a process developed 149 years ago, kills harmful bacteria by simply heating milk for a specific amount of time. (Food Safety Threats are listed in Category B on the CDC List of Critical Biological Agents) *non-suspect case

INTERNATIONAL DISEASE REPORTS*

BOTULISM (CANADA): 5 November 2013, A federal food-safety watchdog has announced the recall of a hotdog relish because of the potential presence of a bacterium that causes botulism. The Canadian Food Inspection Agency (CFIA) says Orange Blossom Farm is recalling its unbranded relish because it may permit the growth of *Clostridium botulinum*. The product was sold in 500-milliliter bottles at the St. Jacob's Farmer's Market, near Waterloo, ON. The agency says food contaminated with the toxin may not look or smell spoiled but can still make you sick. Symptoms can include nausea, vomiting, fatigue, dizziness, blurred or double vision, dry mouth, respiratory failure, and paralysis. The CFIA says there have been no reported illnesses due to the relish. (Botulism is listed in Category A on the CDC List of Critical Biological Agents) *Non-suspect case

CRIMEAN-CONGO HEMORRHAGIC FEVER (PAKISTAN): 7 November 2013, A patient succumbed to Crimean-Congo hemorrhagic fever (CCHF) virus, increasing the death toll to 3 [in Punjab province]. The Health Department has confirmed the death toll. According to local reports, a patient who had symptoms of CCHF died in Lahore [Punjab province] on Thursday [7 Nov 2013]. CCHF is a tick-borne viral disease which is mainly transferred to humans from pets [more probably agricultural livestock]. Its symptoms include fever, flu, bloody urine, vomiting and nose bleeding. About 30 percent of the cases result in death on the 2nd week of the illness. (Viral Hemorrhagic Fevers are listed in Category A on the CDC List of Critical Biological Agents) *Non-suspect case

National and International Disease Reports are retrieved from http://www.promedmail.org/.

OTHER RESOURCES AND ARTICLES OF INTEREST

More information concerning Public Health and Emergency Preparedness can be found at the Office of Preparedness and Response website: http://preparedness.dhmh.maryland.gov/

Maryland's Resident Influenza Tracking System: http://dhmh.maryland.gov/flusurvey

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NOTE: This weekly review is a compilation of data from various surveillance systems, interpreted with a focus on a potential BT event. It is not meant to be inclusive of all epidemiology data available, nor is it meant to imply that every activity reported is a definitive BT event. International reports of outbreaks due to organisms on the CDC Critical Biological Agent list will also be reported. While not "secure", please handle this information in a professional manner. Please feel free to distribute within your organization, as you feel appropriate, to other professional staff involved in emergency preparedness and infection control.

For questions about the content of this review or if you have received this and do not wish to receive these weekly notices, please e-mail us. If you have information that is pertinent to this notification process, please send it to us to be included in the routine report.

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Syndrome Definitions for Diseases Associated with Critical Bioterrorism-associated Agents

Table: Text-based Syndrome Case Definitions and Associated Category A Conditions

Syndrome	Definition	Category A Condition
Botulism-like	ACUTE condition that may represent exposure to botulinum toxin ACUTE paralytic conditions consistent with botulism: cranial nerve VI (lateral rectus) palsy, ptosis, dilated pupils, decreased gag reflex, media rectus palsy. ACUTE descending motor paralysis (including muscles of respiration) ACUTE symptoms consistent with botulism: diplopia, dry mouth, dysphagia, difficulty focusing to a near point.	Botulism
Hemorrhagic Illness	SPECIFIC diagnosis of any virus that causes viral hemorrhagic fever (VHF): yellow fever, dengue, Rift Valley fever, Crimean-Congo HF, Kyasanur Forest disease, Omsk HF, Hantaan, Junin, Machupo, Lassa, Marburg, Ebola ACUTE condition with multiple organ involvement that may be consistent with exposure to any virus that causes VHF ACUTE blood abnormalities consistent with VHF: leukopenia, neutropenia, thrombocytopenia, decreased clotting factors, albuminuria	VHF
Lymphadenitis	ACUTE regional lymph node swelling and/ or infection (painful bubo- particularly in groin, axilla or neck)	Plague (Bubonic)
Localized Cutaneous Lesion	SPECIFIC diagnosis of localized cutaneous lesion/ ulcer consistent with cutaneous anthrax or tularemia ACUTE localized edema and/ or cutaneous lesion/ vesicle, ulcer, eschar that may be consistent with cutaneous anthrax or tularemia INCLUDES insect bites EXCLUDES any lesion disseminated over the body or generalized rash EXCLUDES diabetic ulcer and ulcer associated with peripheral vascular disease	Anthrax (cutaneous) Tularemia
Gastrointestinal	ACUTE infection of the upper and/ or lower gastrointestinal (GI) tract SPECIFIC diagnosis of acute GI distress such as Salmonella gastroenteritis ACUTE non-specific symptoms of GI distress such as nausea, vomiting, or diarrhea EXCLUDES any chronic conditions such as inflammatory bowel syndrome	Anthrax (gastrointestinal)

Syndrome Definitions for Diseases Associated with Critical Bioterrorism-associated Agents
(continued from previous page)

Syndrome	Definition	Category A Condition
Respiratory	ACUTE infection of the upper and/ or lower respiratory tract (from the oropharynx to the lungs, includes otitis media) SPECIFIC diagnosis of acute respiratory tract infection (RTI) such as pneumonia due to parainfluenza virus ACUTE non-specific diagnosis of RTI such as sinusitis, pharyngitis, laryngitis ACUTE non-specific symptoms of RTI such as cough, stridor, shortness of breath, throat pain EXCLUDES chronic conditions such as chronic bronchitis, asthma without acute exacerbation, chronic sinusitis, allergic conditions (Note: INCLUDE *acute exacerbation* of chronic illnesses.)	Anthrax (inhalational) Tularemia Plague (pneumonic)
Neurological	ACUTE neurological infection of the central nervous system (CNS) SPECIFIC diagnosis of acute CNS infection such as pneumoccocal meningitis, viral encephailitis ACUTE non-specific diagnosis of CNS infection such as meningitis not otherwise specified (NOS), encephailitis NOS, encephalopathy NOS ACUTE non-specific symptoms of CNS infection such as meningismus, delerium EXCLUDES any chronic, hereditary or degenerative conditions of the CNS such as obstructive hydrocephalus, Parkinson's, Alzheimer's	Not applicable
Rash	ACUTE condition that may present as consistent with smallpox (macules, papules, vesicles predominantly of face/arms/legs) SPECIFIC diagnosis of acute rash such as chicken pox in person > XX years of age (base age cut-off on data interpretation) or smallpox ACUTE non-specific diagnosis of rash compatible with infectious disease, such as viral exanthem EXCLUDES allergic or inflammatory skin conditions such as contact or seborrheaic dermatitis, rosacea EXCLUDES rash NOS, rash due to poison ivy, sunburn, and eczema	Smallpox
Specific Infection	ACUTE infection of known cause not covered in other syndrome groups, usually has more generalized symptoms (i.e., not just respiratory or gastrointestinal) INCLUDES septicemia from known bacteria INCLUDES other febrile illnesses such as scarlet fever	Not applicable

Syndrome Definitions for Diseases Associated with Critical Bioterrorism-associated Agents (continued from previous page)

Syndrome	Definition	Category A Condition
Fever	ACUTE potentially febrile illness of origin not specified INCLUDES fever and septicemia not otherwise specified INCLUDES unspecified viral illness even though unknown if fever is present EXCLUDE entry in this syndrome category if more specific diagnostic code is present allowing same patient visit to be categorized as respiratory, neurological or gastrointestinal illness syndrome	Not applicable
Severe Illness or Death potentially due to infectious disease	ACUTE onset of shock or coma from potentially infectious causes EXCLUDES shock from trauma INCLUDES SUDDEN death, death in emergency room, intrauterine deaths, fetal death, spontaneous abortion, and still births EXCLUDES induced fetal abortions, deaths of unknown cause, and unattended deaths	Not applicable